Environmental Show of the South 2018

Summary of Recent EPA Memos On Air Pollution Control Regulations

by

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Summary of Recent EPA Memos On Air Pollution Control Regulations

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Reclassification Under CAA Section 112

January 25, 2018 Memorandum from William L. Wehrum to EPA Regional Air Division Directors

Subject: Reclassification of Major Sources as Area Sources Under Section 112 of the Clean Air Act

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Reclassification Under CAA Section 112

Under NESHAPs, sources are classified as major or area sources and requirements differ according to this classification

Major Source – has potential emissions of 10 tpy or more of any on HAP or 25 tpy or more of all combined HAP emissions

Area Source – a source that is not major

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Reclassification Under CAA Section 112

In 1995, John S. Seitz wrote a memo to the EPA Regional Directors which set policy that if a major source NESHAP became applicable to a major source, then that source must comply with the major source NESHAP even if the source subsequently became an area source.

This became known as the once-in-always-in policy

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Reclassification Under CAA Section 112

The reasoning offered for this policy was as follows:

- Sources subject to MACT standards may be limited to less than major source emission thresholds by the standard.
- Allowing such a source to obtain area source status, would allow that source to raise its emissions to the major source thresholds.
- “Thus, the maximum achievable emissions reductions that Congress mandated for major sources would not be achieved”

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Reclassification Under CAA Section 112

Example: A facility has potential (HAP) emissions of 100 tons/year. After compliance with the applicable MACT standard, which requires a 99 percent emissions reduction, the facility's total potential (HAP) emissions would be 1 ton/year. Under today's guidance, that facility could not subsequently operate with emissions exceeding the maximum achievable control technology emission level. The facility could not escape continued applicability of the MACT standard by obtaining "area source" status through limitations on emissions up to the 10/25 ton per year major source thresholds.

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Reclassification Under CAA Section 112

Area Source MACT Standards

At the end of the memo, Seitz discusses EPA authority to implement area source MACT standards through

- Residual Risk Standards
- Urban Area Source Standards

However, none of these standards had been promulgated in 1995.

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Reclassification Under CAA Section 112

The 2018 Wehrum Memo reverses the 1995 Seitz Memo, stating the following:

- 1995 policy is “contrary to the plain language of the CAA, and, therefore, must be withdrawn”.
- The definitions of area and major source in the CAA do not include time
- There is no provision in the CAA which species that a major source MACT standard continues to apply to a source that, subsequent to the “first compliance date” limits its potential to emit to area source status.
- **If a source achieves area source status, then it is only subject to area source rules (not major source rules).**

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Reclassification Under CAA Section 112

It is interesting to note that the following area source MACT standards are currently enforced:

Acrylic/Modacrylic Fibers Production
Aluminum Foundries
Asphalt Processing & Asphalt Roofing Mfg
Brick and Structural Clay
Carbon Black Production
Chemical Manufacturing Area Sources: comprised of the 9 following sources
Ag Chemicals & Pesticide Mfg
Cyclic Crude & Intermediate Production
Industrial Inorganic Chemical Manufacturing
Industrial Organic Chemical Manufacturing
Inorganic Pigments Manufacturing
Misc Organic Chemical Manufacturing
Pharmaceutical Production
Plastic Materials and Resins Mfg

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Reclassification Under CAA Section 112

Area Source Rules cont'd

Synthetic Rubber Mfg
Chemical Preparations Industry
Chromium Compounds
Chromic Acid Anodizing, Decorative Chromium Electroplating, Hard Chromium Electroplating
Commercial Sterilization Facilities
Clay Ceramics Mfg
Commercial Industrial Solid Waste Incinerators - CISWI
Copper Foundries
Dry Cleaning Facilities
Ferroalloys Production
Flexible Polyurethane Foam Fabrication and Production
Gasoline Distribution Bulk Terminal, Bulk Plant and Pipeline Facilities
Gasoline Distribution, Gasoline Dispensing Facilities
Halogenated Solvent Cleaners / Degreasing Organic Cleaners
Hazardous Waste Incineration

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Reclassification Under CAA Section 112

Area Source Rules cont'd

Hospital Ethylene Oxide Sterilizers
Industrial Boilers
Institutional/Commercial Boilers
Iron and Steel Foundries
Lead Acid Battery Manufacturing
Medical Waste Incinerators - HMIWI
Mercury Cell Chlor-Alkali Plants

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Source Determination

April 30, 2018 Letter from William L. Wehrum to Patrick McDonnell of Pennsylvania DEP

Subject: Source Determination – What is Common Control?

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Source Determination

Keystone Sanitary Landfill (KSF) is an existing source that produces landfill gas. KSF controls emissions of landfill gas using a flare.

Meadowbrook Energy plans to build a biogas processing facility contiguous to KSF. They would convert the landfill gas to into pipeline quality natural gas.

Initially, 100% of the feedstock to the Meadowbrook facility would be KSF gas. However, Meadowbrook plans to bring more feedstocks to the plant.

Legal arrangements include a “demarcation” line in the pipeline between the two facilities where KSF owns the gas up the demarcation line and then Meadowbrook owns it after the demarcation line.

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Source Determination

Should the facilities be permitting under one permit?

For TV and NSR purposes, EPA uses three criteria to determine if separate entities should be aggregated as one facility:

1. Same industrial grouping
2. Located on one or more contiguous or adjacent properties
3. Under **common control**

This letter focuses on the concept of common control

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Source Determination

1996 Seitz Memo Definition of Control

In general, the controlling entity is the highest authority that exercises restraining or directing influence over a source's economic or other relevant, pollutant-emitting activities. In considering interactions among facilities, what must be determined is who has the power of authority to **guide, manage, or regulate** the pollutant-emitting activities of those facilities, including "power to make or veto decisions to implement major emission-control measures" or to **influence** production levels or compliance with environmental regulations."

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Source Determination

Letter defines a refined, more narrow EPA approach to definition of control

- Case-by-case basis
- Focus on "the power or authority of one entity to **dictate** decisions of the other that could affect the applicability of, or compliance with, relevant air pollution regulatory requirements."
- Memo states that "it is more logical for entities with autonomy over their ability to comply with air pollution control requirements to be treated as separate source for air permitting purposes."

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Source Determination

A. Control means the power or authority to dictate decisions – "power to direct" vs. "ability to influence"
B. Focus should be on control over decisions that affect the applicability of, or compliance with, relevant air pollution regulatory requirements – specifically control of:
    - Construction or modification of equipment that will result in emissions of air pollution
    - Manner in which such emission units will operate
    - Installation or operation of pollution control equipment
    - Monitoring, testing, recordkeeping, and reporting obligations

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Source Determination

C. Dependency relationships should not be presumed to result in common control

Some previous support facility language demonstrates dependency, but not control:

- Facility 1 would not exist but for the existence of Facility 2
- Facility 1 receives more than 50% of its raw material from Facility 2

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Project Emissions Accounting

March 13, 2018 Memorandum from E. Scott Pruitt to EPA Regional Administrators

Subject: Project Emissions Accounting Under the New Source Review Preconstuction Permitting Program

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Project Emissions Accounting

- §52.21(b)(2)(i) Major modification means any physical change in or change in the method of operation of a major stationary source that would result in: **(Step 1)** a significant emissions increase (as defined in paragraph (b)(40) of this section) of a regulated NSR pollutant (as defined in paragraph (b)(50) of this section); **and** **(Step 2)** a significant net emissions increase of that pollutant from the major stationary source.

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Project Emissions Accounting

Step 1 for Applicability

§52.21(b)(40) Significant emissions increase means, for a regulated NSR pollutant, an ***increase*** in emissions that is significant (as defined in paragraph (b)(23) of this section) for that pollutant.

Step 2 for Applicability

§52.21(b)(3)(i) ***Net*** emissions increase means, with respect to any regulated NSR pollutant emitted by a major stationary source, the amount by which the sum of the following exceeds zero:

(a) The increase in emissions from a particular physical change or change in the method of operation at a stationary source as calculated pursuant to paragraph (a)(2)(iv) of this section; **and**

(b) Any other increases and decreases in actual emissions at the major stationary source that are contemporaneous with the particular change and are otherwise creditable. Baseline actual emissions for calculating increases and decreases under this paragraph (b)(3)(i)(b) shall be determined as provided in paragraph (b)(48) of this section, except that paragraphs (b)(48)(i)(c) and (b)(48)(ii)(d) of this section shall not apply.

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Project Emissions Accounting

In the past, EPA has held that, Step 1 includes only the increases associated with a project (no decreases).

This policy is clearly stated in the March 30, 2010 letter from Barbara A. Finazzo to Kathleen Antoine of Hovensa, LLC. This letter says that taking both Step 1 increases and decreases into account is “project netting” and such netting is not allowed.

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Project Emissions Accounting

PSD Major Chemical Plant with the Following Boilers

Project is to remove Boiler 1 and install Boiler 2

NOx Emissions (tpy)		
Emission Unit	Boiler 1	Boiler 2
Fuel	Coal	Natural Gas
Rating	400 MMBtu/hr	500 MMBtu/hr
Baseline Actual	72	0
Potential	0	79
Increase	-72	79

Under previous EPA Policy forbidding "project netting",
only the 79 tpy increase from Boiler 2 would be counted in Step 1.
79 tpy exceeds significance threshold for NOx, so go to Step 2 facility wide netting.

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Project Emissions Accounting

The March memo introduces the term “project accounting”, which takes into account both increases and decreases associated with a project.

The memo differentiates this practice from “netting” which accounts for emission changes from “other” projects as well.

The memo states that “project accounting” is “taking account of the true emissions impact of the project itself.”

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Project Emissions Accounting

PSD Major Chemical Plant with the Following Boilers

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NOx Emissions (tpy)		
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Fuel	Coal	Natural Gas
Rating	400 MMBtu/hr	500 MMBtu/hr
Baseline Actual	72	0
Potential	0	79
Increase	-72	79

Under "project accounting", the project increase is 79 tpy from Boiler 2 minus 72 tpy from Boiler 1 for a 7 tpy increase. Don't go to Step 2 and no PSD review.

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NSR Actual-to-Projected-Actual Applicability Test

December 7, 2017 Memorandum from E. Scott Pruitt to EPA Regional Administrators

Subject: New Source Review Preconstruction Permitting Requirements: Enforceability and Use of the Actual-to-Projected-Actual Applicability Test in Determining Major Modification Applicability

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NSR Actual-to-Projected-Actual Applicability Test

The memo was written, in part, to clarify confusion over the DTE Energy case.

- DTE's Monroe Station includes 4 coal-fired units. It is the largest coal-fired plant in Michigan. Each unit is capable of producing 805 MW of electricity.
- In 2010, DTE planned a three-month-long overhaul of Unit 2. The project required 600 construction workers and $65 million.
- DTE projected a post-project emissions increase of 3,701 tons per year of sulfur dioxide and 4,096 tons per year of nitrogen oxides.
- DTE did not obtain an NSR Permit before beginning construction.

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NSR Actual-to-Projected-Actual Applicability Test

DTE Energy Case – Cont'd

- DTE characterized the project as routine maintenance, repair and replacement activities, which would have exempted the project from the necessity of a NSR pre-construction permit.
- DTE also determined that the entire emission increase fell under the demand growth exclusion (could have accommodated), which would have exempted the project from the necessity of a NSR pre-construction permit
- EPA filed an enforcement action, arguing that the project was a major modification under the NSR program that required a preconstruction permit and challenging DTE's routine maintenance and demand growth exclusion designations.

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NSR Actual-to-Projected-Actual Applicability Test

DTE Energy Case – Cont'd

- Flue gas desulfurization to control SO2 by 97% was contracted in 2010 and began operation in 2014.
- Selective catalytic reduction to control NOx by 90% also began operation in 2014.
- Post-project data have demonstrated decreased actual emissions
- Pre and post project capacity of the unit remained unchanged at 805 MW

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NSR Actual-to-Projected-Actual Applicability Test

- This memo seeks to clarify confusion concerning "projected actual emissions" when determining NSR applicability.
- Before 2002, we calculated a project emissions increase (Step 1) as post project potential emissions minus the baseline actual emissions to determine NSR applicability. This method is still acceptable.
- The 2002 NSR reforms also allow calculation of a project increase (Step 1) as the projected actual emissions minus the baseline actual emissions to determine NSR applicability.

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NSR Actual-to-Projected-Actual Applicability Test

Definition of Projected Actual

§52.21(b)(41)(i)

Projected actual emissions means the maximum annual rate, in tons per year, at which an existing emissions unit is projected to emit a regulated NSR pollutant in any one of the 5 years (12-month period) following the date the unit resumes regular operation after the project, or in any one of the 10 years following that date, if the project involves increasing the emissions unit's design capacity or its potential to emit that regulated NSR pollutant and full utilization of the unit would result in a significant emissions increase or a significant net emissions increase at the major stationary source.

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NSR Actual-to-Projected-Actual Applicability Test

Definition of Projected Actual – cont'd

§52.21(b)(41)(ii)

In determining the projected actual emissions under paragraph (b)(41)(i) of this section (before beginning actual construction), the owner or operator of the major stationary source:

(a) Shall consider all **relevant** information, including but not limited to, historical operational data, the company's own representations, the company's expected business activity and the company's highest projections of business activity, the company's filings with the State or Federal regulatory authorities, and compliance plans under the approved State Implementation Plan; and

(b) Shall include **fugitive emissions** to the extent quantifiable, and emissions associated with **startups, shutdowns, and malfunctions**; and

(c) Shall exclude, in calculating any increase in emissions that results from the particular project, that portion of the unit's emissions following the project that an existing unit **could have accommodated** during the consecutive 24-month period used to establish the baseline actual emissions under paragraph (b)(48) of this section and that are also **unrelated to the particular project**, including any increased utilization due to product **demand growth**

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NSR Actual-to-Projected-Actual Applicability Test

Increase (tpy) =

+ Projected Actual (tpy)
  - Include Fugitives (tpy)
  - Include Startup Shutdown Malfunction (tpy)
  - Exclude Could Have Accommodated (tpy)

– Baseline Actual (tpy)

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NSR Actual-to-Projected-Actual Applicability Test

What are the source's responsibilities?

1. Document and maintain a pre-project record of the NSR applicability information identified at 40 CFR 52.21(r)(6)(i).

   (a) A description of the project;

   (b) Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project; and

   (c) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under paragraph (b)(41)(ii)(c) of this section and an explanation for why such amount was excluded, and any netting calculations, if applicable.

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NSR Actual-to-Projected-Actual Applicability Test

Responsibilities cont'd

2. If an electric utility steam generating unit, then submit the information in Item 1.
3. Monitor and record the emissions, on a calendar-year basis, for the appropriate 5 or 10 year period post-project.
   - 5 yrs if project does not include an increase in design capacity or potential to emit
   - 10 yrs if project includes increase in emission unit design capacity or potential to emit
4. If an electric utility steam generating unit, then submit a report of annual emissions for each year the monitoring is required.
5. For all other units, submit a report of annual emissions if the annual emissions exceed the baseline actual emissions by a "significant" amount and if annual emissions differ from the pre-construction projection.

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NSR Actual-to-Projected-Actual Applicability Test

Memo makes the following statements:

1. EPA will "presume that any increases that occur after 5 years are not associated with the physical or operational changes."
2. EPA considers an owner's intent to administratively manage emissions as relevant to the determination of NSR applicability
3. A permit modification to include the projected actual emissions is not required.

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NSR Actual-to-Projected-Actual Applicability Test

Memo makes the following statements Cont'd:

4. EPA does not intend to substitute its judgement for that of the owner or operator by "second guessing" the owner's or operator's emission projections.
5. If the actual emission increase is below NSR applicability for the specified time frames, then EPA does not presently intend to take enforcement action against the company

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Questions?

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